

DNA Extraction from Zucchini

Prepare:

- Ethyl alcohol, at -20°C
- Bowl of hot Water

Needed:

- Grater
- High shot glass (4 cl, make sure you can get one with clear glass)
- 20 g Zucchini or any fruit you can mash
- Table salt
- Zip-top bag
- Coffee filters
- Dishwashing detergent
- Paperclip or toothpick

1. Make sure the ethyl alcohol is stored in your freezer and has cooled down to – 20 °C. We will need this later to precipitate DNA. This is very Important!
2. Prepare a bowl of hot water.
3. Grate down the Zucchini until you have a nice sludge. A blender will do a nice job, but do not overblend. We only want to increase surface for the next step. Do not make a smoothie!
4. Fill your grated zucchini sludge into the zip-top bag.
5. Dissolve ½ tablespoon of table salt in about half a cup of your hot water. Then add 2 tablespoons of dishwashing detergent and mix gently. Avoid making bubbles!
This solution will be able to break the cell membrane open and latter helps the DNA stick together.
6. Add about half of the solution to your zip-top bag, seal it and place it in the bowl of hot water for 10-20 minutes. During that step the cell membrane is being broken open and the DNA will be released into the liquid. The warmth of the incubation water will increase the speed of that process.
7. Next step is to filter that stuff. Let it drip right into your high shot glass. Within the liquid the DNA is in solution. So that is the part we want to have. You can squeeze the coffee filter gently to get more of that precious juice. Just don't rip it. The glass should be not more than half full.
8. The next step is very critical. Pour the ice-cold ethyl alcohol onto your solution at the side of the glass. Don't let it mix with the filtered solution. You want to get two layers. If you have issues in doing so, ask the barkeeper of your trust how to do it. Let it sit for a few minutes
9. You will see white fibers forming between the two layers. This is your DNA. Using and bent open paperclip you will be able to collect it from between those layers. Try to wind the filaments around the paperclip. Here you go. That's your DNA.